Joint Warfighting Concept Development Conference

30 Apr 04

Col BA Andrews
Force Application Assessment Division
(703) 614-1622

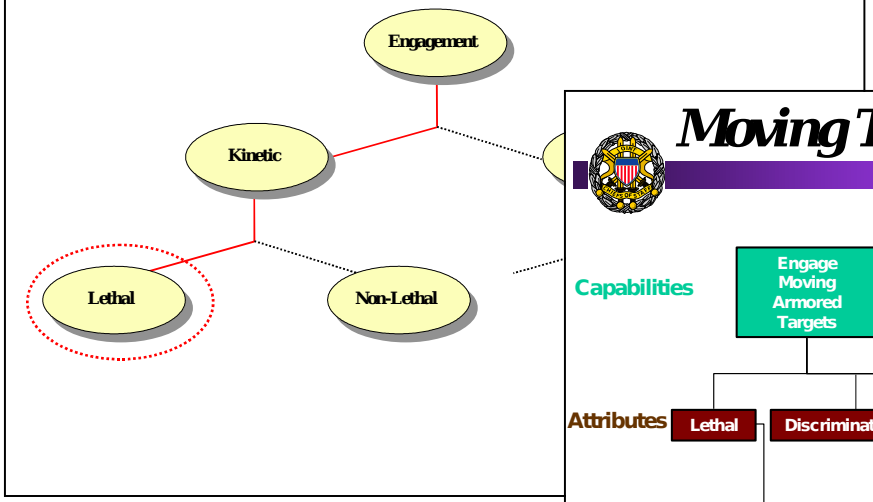
Utility of FA FC (so far)

- **JCIDS Assessments**

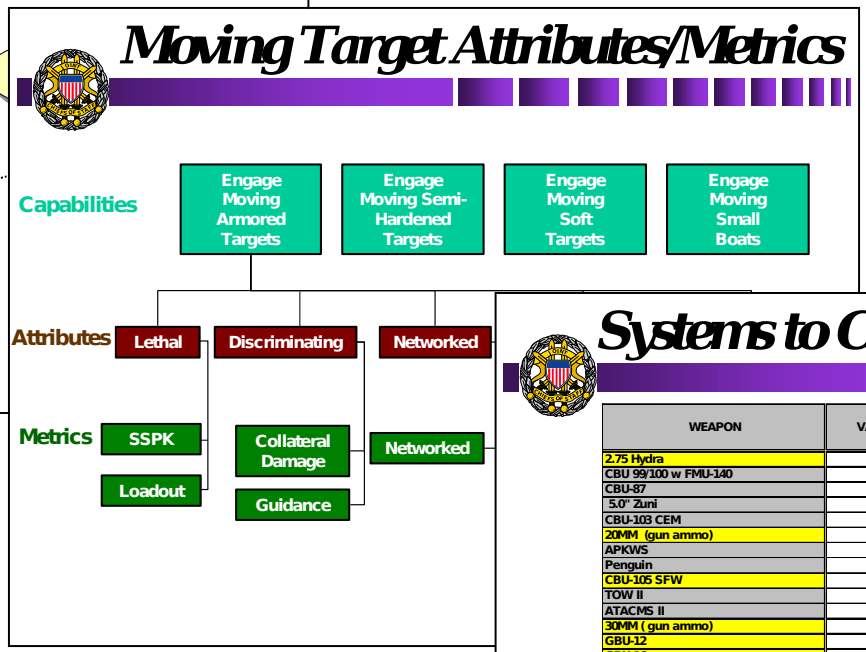
Example Assessment

Moving Target Capabilities Assessment in Support of Land Attack Weapon Review

Context



Moving Target Attributes/Metrics



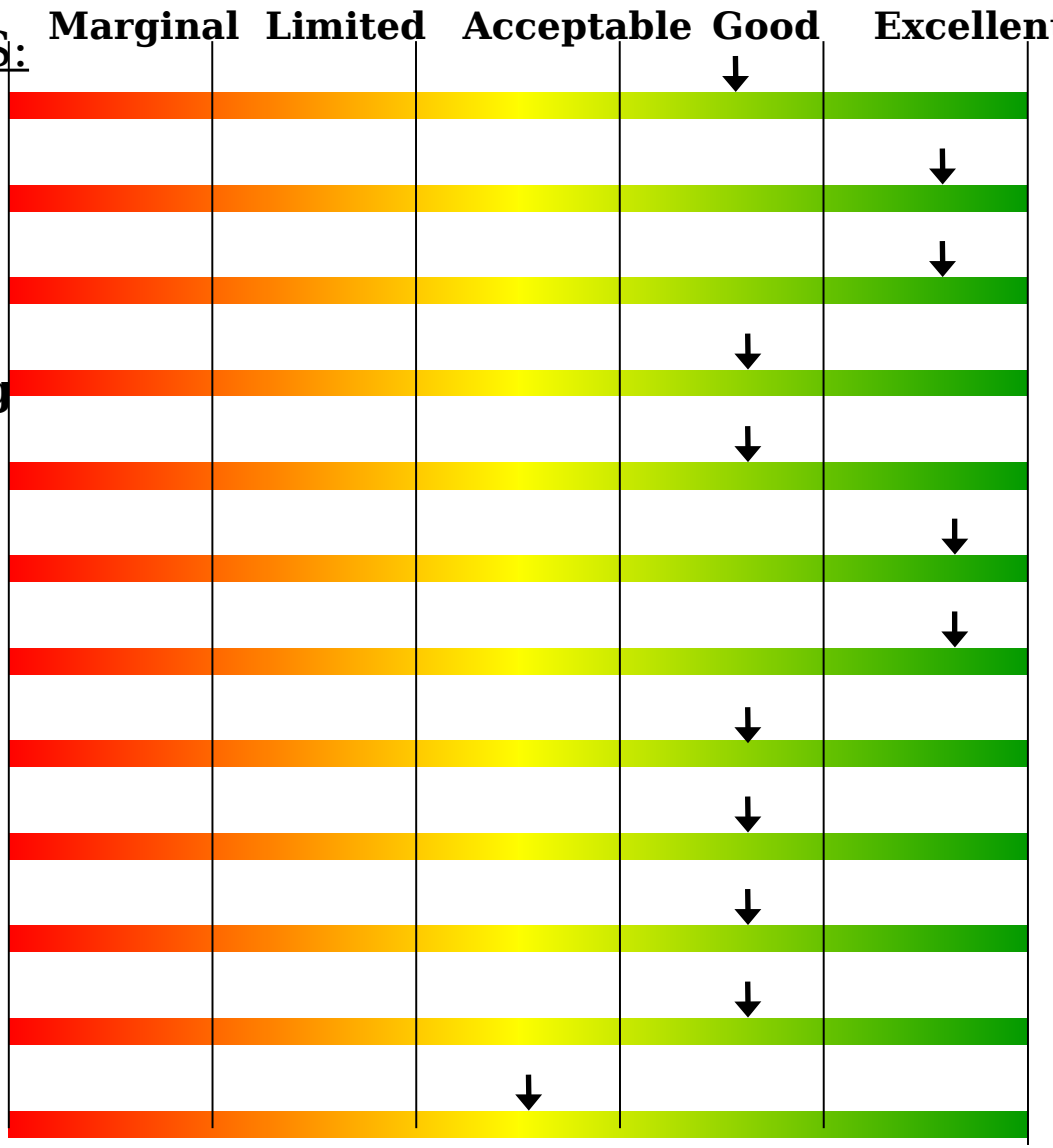
Systems to Capability Assessment

WEAPON	VALUE	RW Guided AW	RW Guided SKR/MID-C	RW Unguided	FW Guided AW	FW Guided SKR/MID-C	FW Unguided
2.75 Hydra	20			√			√
CBU 99/100 w FMU-140	21						√
CBU-87	22						√
5.0" Zuni	23			√			√
CBU-103 CEM	25					√	
20MM (gun ammo)	37			√			√
APKWS	37		√				
Penguin	42		√				
CBU-105 SFW	42					√	
TOW II	46		√				
ATACMS II	47						
30MM (gun ammo)	48			√			√
GBU-12	53					√	
GBU-16	54					√	
AGM 65 G2 IR SH SH/BF (Maverick(AF)	60					√	
AGM 65 F IR SH/BFMaverick(DoN)	60					√	
AGM 65 E LSR SH/BFMaverick(DoN)	60					√	
AGM 65 B/H TV SH (Maverick(AF)	61					√	
AGM 65 K TV SH/BF (Maverick(AF)	62					√	
SLAM ER	62					√	
GBU-10	63					√	
AGM 114 Hellfire (longbow)	63	√					
Hellfire	64		√				
AGM-130	64					√	
GBU-15	65					√	
JCM	88	√			√		
SDB II	89				√		

= Currently in production

Stryker BCT – Rainbow

FA ATTRIBUTES:



Comments:

Only lack is DF main g
Imbedded CA, PSYOP & HUMINT
Via network
Interoperable, share SA
ABCS. Bridges to JTF
Ties to Army or Joint C2
Speed & stealth
SA /SU
Cage armor added (RPG)

Relationships

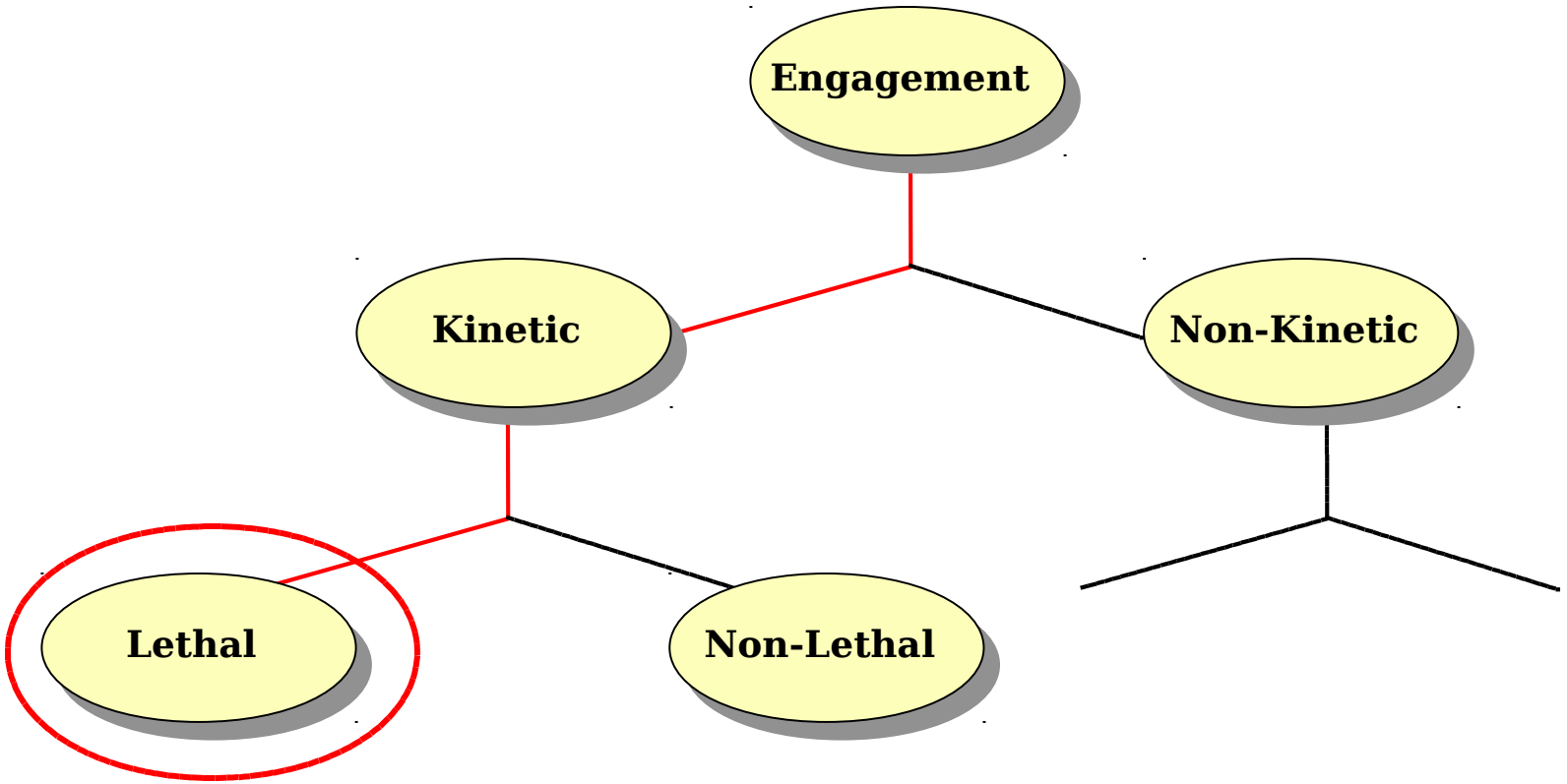
JICs

Functionals

Assessments

Backups

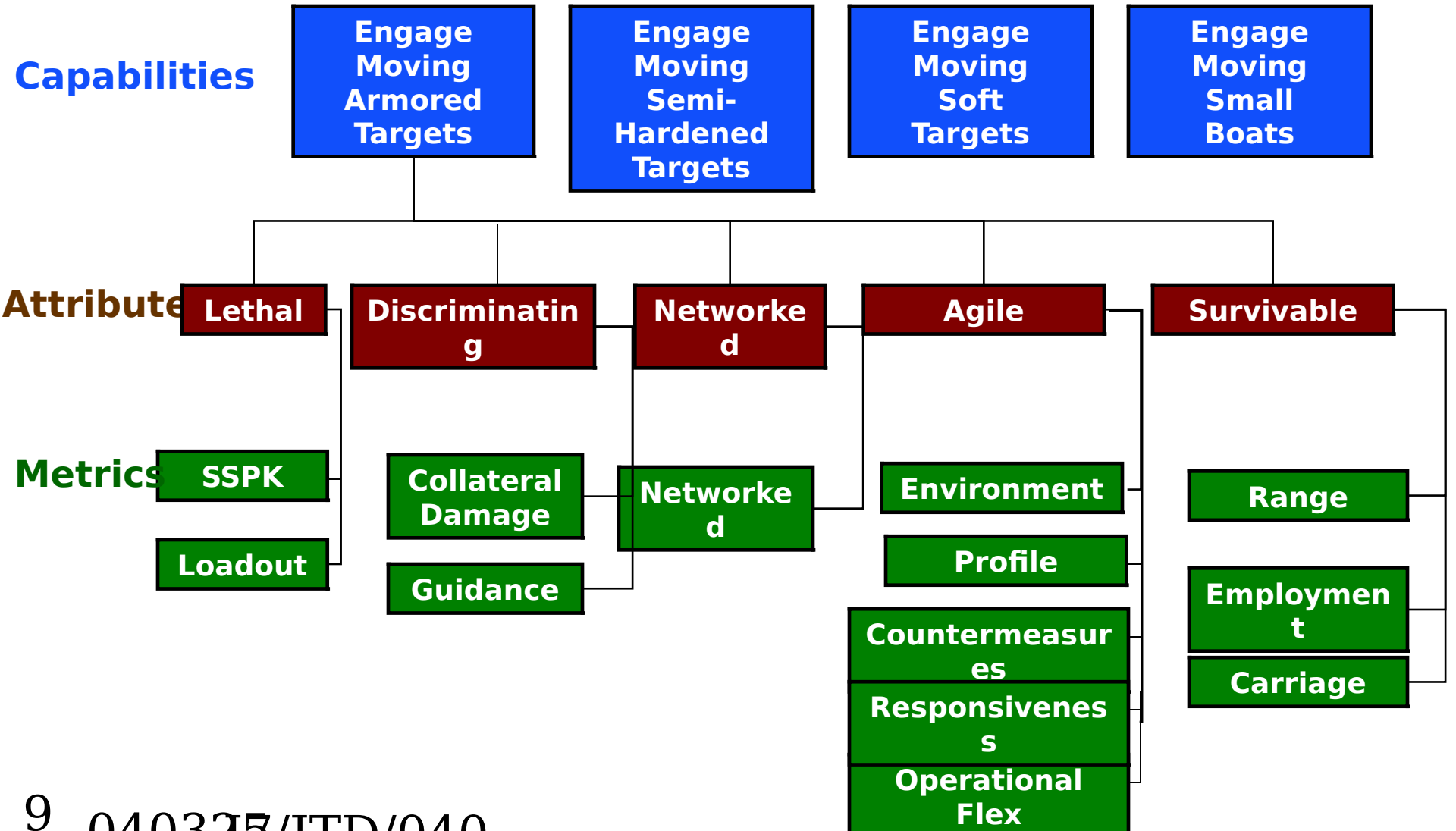
Context



Systems to Capability Assessment

	Moving Armored Targets	Moving semi-hardened Targets	Moving Soft Targets	Moving Small Boats
30MM (gun ammo)	44	46	55	48
20MM (gun ammo)	19	25	55	48
2.75 Hydra	17	22	29	12
5.0" Zuni	20	25	30	15
CBU 99/100	20	22	26	18
CBU 99/100 w FMU-140	20	22	26	18
CBU-87 CBU-103 CEM	21	24	25	19
CBU-103 CEM	23	26	28	21
CBU-105 SFW	36	40	45	47
ATACMS II	49	50	54	33
TOW II	44	50	56	32
APKWS	31	37	52	28
AGM 114 Hellfire (longbow)	68	68	68	49
Hellfire	71	71	71	43
Penguin	37	42	53	34
GBU-12	36	48	59	67
GBU-16	36	52	58	68
GBU-10	65	61	57	69
GBU-15	67	63	59	71
AGM 65 A/B/H TV SH (Maverick(AF)	62	60	58	63
AGM 65 K TV SH/BF (Maverick(AF)	63	61	59	65
AGM 65 D/G2 IR SH SH/BF (Maverick(AF)	59	59	58	62
AGM 65 F IR SH/BFMaverick(DoN)	55	59	59	65
AGM 65 E LSR SH/BFMaverick(DoN)	55	59	59	65
AGM-130	51	65	63	75
SLAM ER	50	65	63	71
JCM	88	88	88	89
SDB II	89	88	87	93

Moving Target Attributes/Metrics



Systems to Capability Assessment

WEAPON	VALUE	RW			FW		
		Guided AW	Guided SKR/MID-C	Unguided	Guided AW	Guided SKR/MID-C	Unguided
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GBU-15	65					√	
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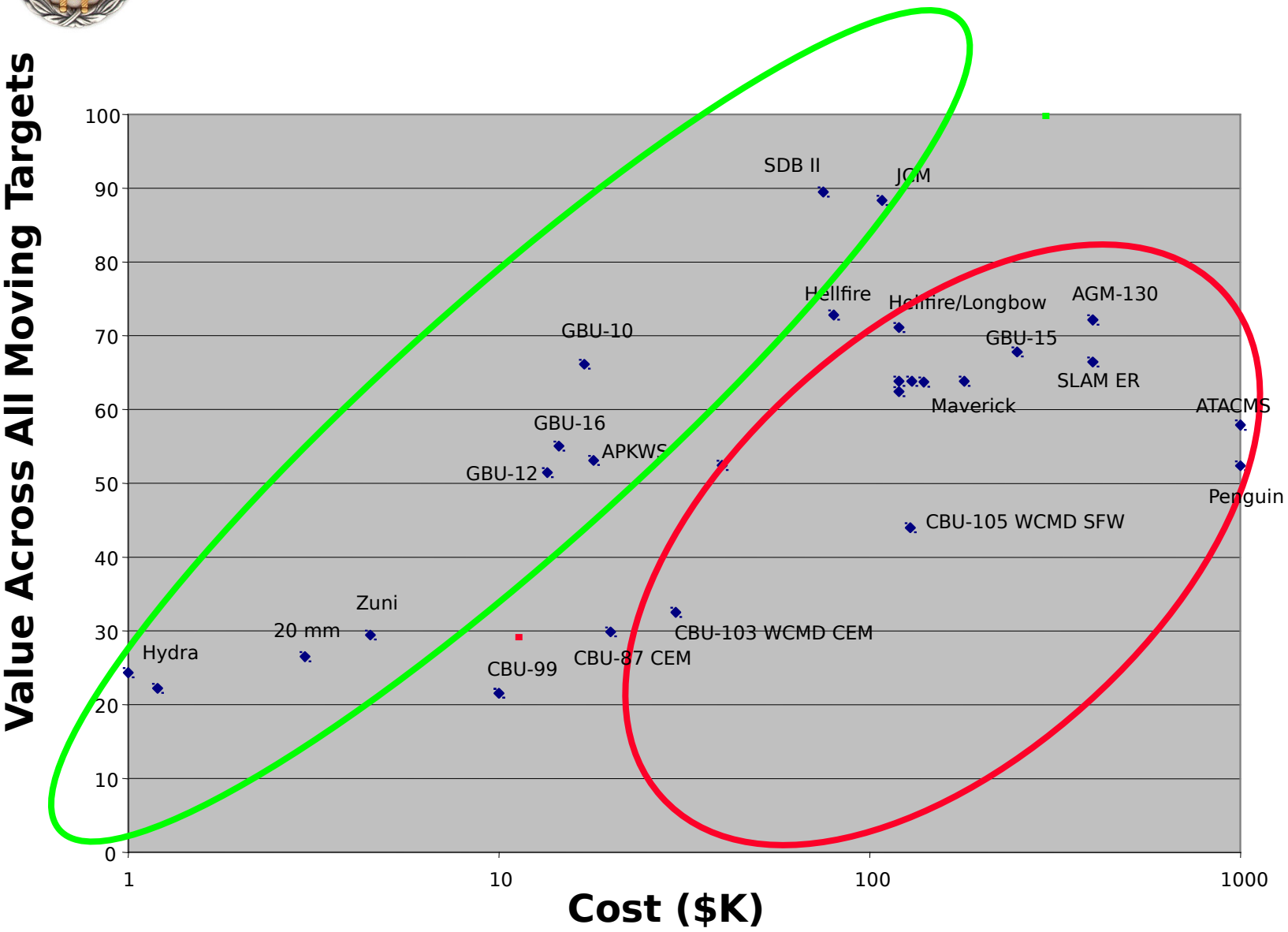
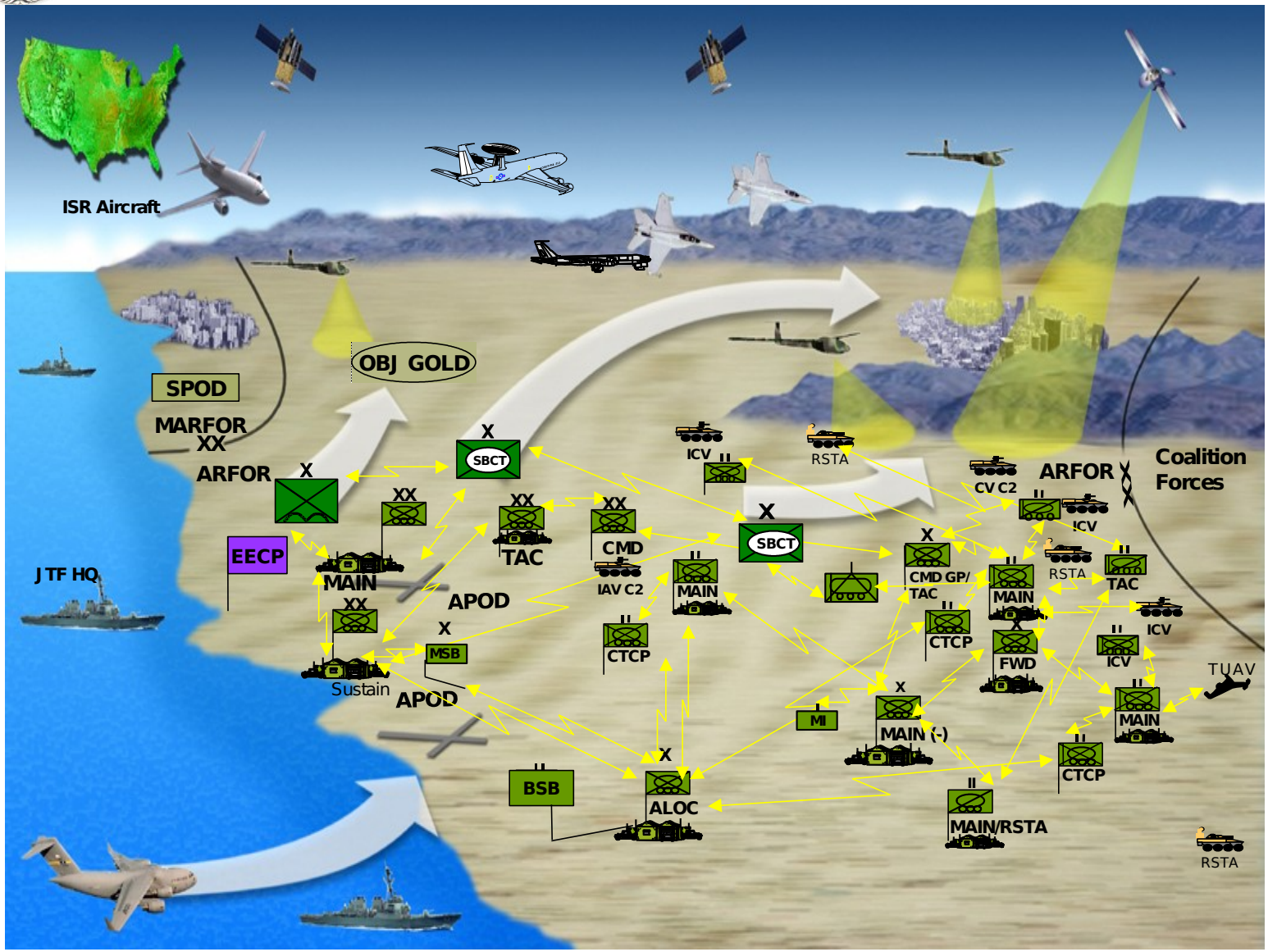
= **Currently in production**

Cost-Benefit Analysis



OV-1 SBCT Concept Diagram



STRYKER BCT

JCIDS INFO

REQ'D ACTION: VALIDATE REVISED ORD

DOC TYPE: ORD

SPONSOR: USA

ACAT: I

JPD: JROC INTEREST

NEXT MS: III, March 04

DRIVER: JROC 19 Feb / DAB 20 Feb seeking FRP

SCHEDULE

JCB: 13 Feb 04

JROC: 19 Feb 04

SPECIFICS

DESCRIPTION: Interoperable, inter-netted family of wheeled combat vehicles with nine current variations.

PROJECTED IOC: 4QTR 03 (Achieved)

PROJECTED FOC: 2QTR 08

SUPPORTING DOCUMENTS

- IAV ORD approved March 2000
- STRYKER ORD completed FLAG staffing 5 Feb 04
- AF/ARMY Transportability MOA

STAFFING COMMENTS

Critical comments reference:

1. Transportability KPP – resolved. AF & TRANS

2. 155 Arty KPP – resolved. Placed KPP in Block

3. Interoperability KPP – working. Roadmap pla

Briefing to OSD AT&L scheduled for August 04

($M)	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY06-11
POM/BES 05-09 Requirements (BP5.1)	964.9	1165.9	775.6	98.2	168.5	181.1	188.1	2,577
POM/BES 05-09 Funding (BP5.1)	959.7	961.7	771.5	97.8	168.5	181.1	188.1	2,369
% Funded	99%	82%	99%	100%	100%	100%	100%	92%
POM/BES 05-09 UFR	5	204	4	0	0	0	0	208
Emerging Requirements		30	22					52
Total POM 06-11 Projected Reqts		1,196	798	98	169	181	188	2,629

Recommendation: Approve revised ORD

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DART Construct

DART steps in developing a concept document (where capabilities, attributes and metrics fit in concept development). DART's proposed logical flow in developing a concept document is as follows:

Military Problem. Define the problem space, i.e., what is the military problem that the concept will address? In many cases, it will be useful to establish mission areas (for JOCs) or capability areas (for JFCs) that divide the overall problem space into distinct areas).

- **Concept. (the how or big idea). Develop the concept, i.e., the "big idea" for how the joint force will conduct the operations or function being addressed. In cases where mission/capability areas have been defined, develop an enabling concept that describes the "how' for accomplishing each of these areas).**
  - **Capabilities. Define the key capabilities needed to implement the concept, and if applicable enabling concepts. Capabilities should be expressed as "the ability to" execute a mission (for JOCs) or task (for JFCs).**
    - **Attributes. For each capability defined, state the testable of measurable characteristics of the joint force that describe the capability.**
      - **Metrics. For each attribute, establish measures in the context of specified conditions (and eventually define specific criteria that can be validated empirically).**

JCIDS Construct

Concept. JOpsC; JOCs; JFCs; and JICs.

Capabilities. the ability to execute a specified course of action. It is defined by an operational user and expressed in broad operational terms in the format of an initial capabilities document or a DOTMLPF change recommendation. In the case of materiel proposals, the definition will progressively evolve to DOTMLPF performance attributes identified in the CDD and the CPD.

Attributes. a testable or measurable characteristic that describes an aspect of a system or capability.

Metrics. no definition given.

UJTL Construct

Task. A discrete event or action that enables a mission or function to be accomplished by individuals or organizations. Tasks are based upon doctrine, TTPs, or an organization's SOP, and are generated by mission analysis.

Mission. The task, together with the purpose, that clearly indicates the action to be taken and the reason for the action.

Measure. provides the basis for describing various levels of task performance.

Conditions. Those variables of an operational environment or situation in which a unit, system, or individual is expected to operate that may affect performance.

Criterion. The minimum acceptable level of performance associated with a particular measure or task performance. It is often expressed as hours, days, percent, occurrences, minutes, miles, or some other command stated measure.

Battlespace Awareness Construct

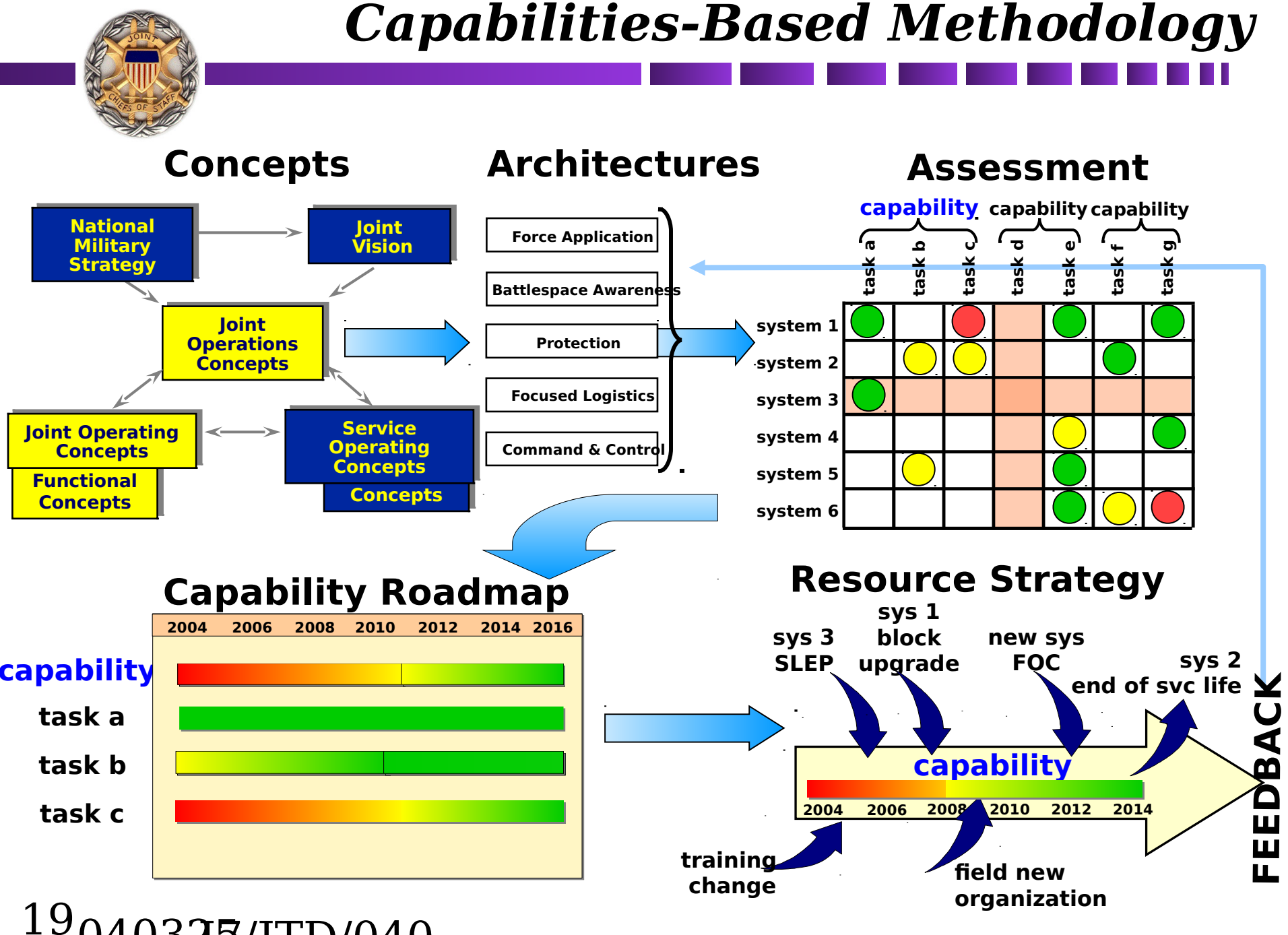
Mission. Major Joint Operating Concept (MCO, HLS, SD, SO)

- **Task. Major activity within the JOC (interdiction, JSEAD, etc.)**
  - **Sub-task. Discreet portion of the task accomplished on a contiguous part of the Battlespace**
    - **Drivers. Technical or operational issues that drive the solution to the sub-task (the hard challenge).**
      - **Capability. The desired ability which satisfies the driver, and encompasses the accomplishment of the sub-task.**

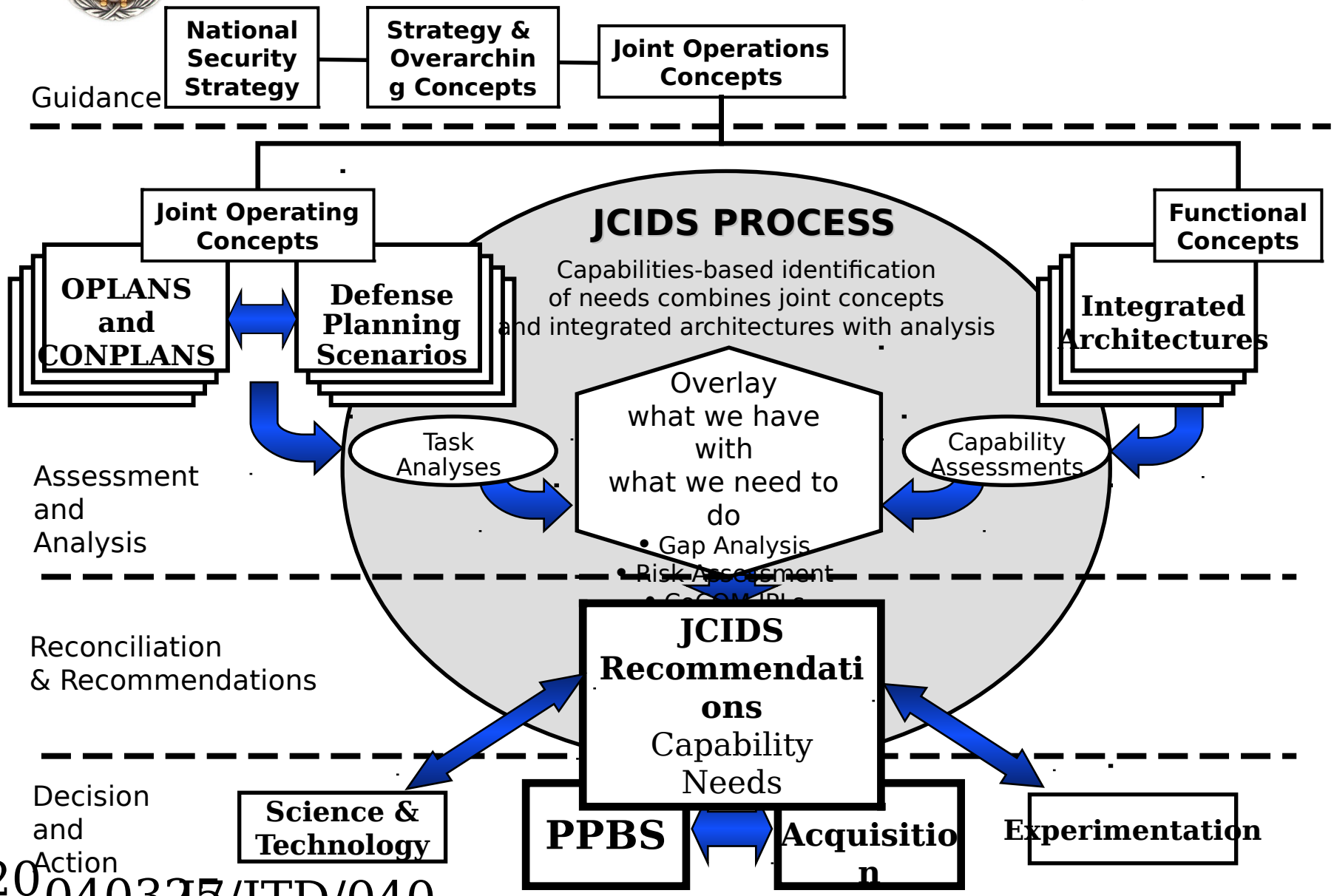
Construct Comparison

DART	JCIDS	UJTL	BA
• Military Problem	• Concept	• Task	• Mission
• Concept	• Capabilities	• Mission	• Task
• Capabilities	• Attributes	• Measure	• Sub-task
• Attributes	• Metrics	• Conditions	• Drivers
• Metrics		• Criterion	• Capability

Capabilities-Based Methodology



Top Down Capability Need Identification



FAAD Attributes

LETHAL -- Create desired lethal and destructive effects

NON-LETHAL -- Create desired non-lethal effects

CONTROL UNDESIRED EFFECTS -- Limit collateral effects

PREDICTIVE -- Predict events through shared situational understanding

STREAMLINED ADAPTIVE C2 -- Rapid decision making and dissemination

CONNECTED -- Agility and responsiveness through network

SIMULTANEOUS -- Integration of multiple forces and application of continuous pressure

STRATEGIC AGILITY -- Project combat-ready forces over strategic distances

TACTICAL DOMINANCE -- Dominate all encounters within the